Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1. – 124. (canceled).

Claim 125. (new) An antenna apparatus that controls the magnitude and gradient of a radiated electric field, including an antenna comprising:

a) a voltage divider having at least two electrical contacts coupled to it; and

b) a plurality of spaced apart, low resistance, finger elements coupled to the voltage divider at intervals between the at least two contacts, such that the electrical potential along a long axis of each element is approximately uniform and each finger element radiates at an electric potential that is a function of the potential on the voltage divider where the element is coupled,

wherein the voltage divider is a resistive divider.

Claim 126. (new) The apparatus of claim 125 wherein the width of the finger elements varies along the long axis.

Claim 127. (new) The apparatus of claim 125 wherein the voltage divider and the plurality of finger elements are disposed on an insulating surface.

Claim 128. (new) The apparatus of claim 127 wherein the insulating surface is substantially planar.

Claim 129. (new) The apparatus of claim 125 wherein the long axes of the finger elements are substantially straight and parallel.

Claim 130. (new) The apparatus of claim 128 wherein the long axes of the finger elements are substantially orthogonal to the line of the voltage divider.

Claim 131. (new) The apparatus of claim 125 wherein the long axes of the finger elements are curved.

Claim 132. (new) The apparatus of claim 125 wherein the intervals between the finger elements are substantially uniform.

Claim 133. (new) The apparatus of claim 125 wherein a difference in electrical potential between each pair of adjacent finger elements is substantially constant.

Claim 134. (canceled)

Claim 135. (new) An antenna apparatus that controls the magnitude and gradient of a radiated electric field, including an antenna comprising:

a) a voltage divider having at least two electrical contacts coupled to it; and

b) a plurality of spaced apart, low resistance, finger elements coupled to the voltage divider at intervals between the at least two contacts, such that the electrical potential along a long axis of each element is approximately uniform and each finger element radiates at an electric potential that is a function of the potential on the voltage divider where the element is coupled, wherein the voltage divider is coupled to resistive elements having variable resistance values.

Claim 136. (new) The apparatus of claim 135 wherein the resistive elements are fuses.

Claim 137. (new) The apparatus of claim 135 wherein the variable resistance elements can be tuned to a desired value.

Claim 138. (new) The apparatus of claim 135 wherein the voltage divider has more than two electrical contacts and at least distinct two pairs of the electrical contacts couple to a radio frequency driver.

Claim 139. (new) An antenna apparatus that controls the magnitude and gradient of an electric field radiating from it, the antenna comprising:

a) a voltage divider shaped in a loop and having at least three electrical contacts at intervals on the loop; and

b) a plurality of spaced apart, low resistance, finger elements coupled to the voltage divider at intervals between each two of the at least three contacts, such that the electrical potential along a long axis of each element is substantially uniform.

Claim 140. (new) The apparatus of claim 139 wherein the width of the finger elements varies along the long axis.

Claim 141. (new) The apparatus of claim 139 wherein the voltage divider and the plurality of finger elements are disposed on an insulating surface.

Claim 142. (new) The apparatus of claim 139 wherein the long axes of the finger elements are substantially congruent with longitudes of an ellipsoidal surface and the voltage divider is substantially along an equator of latitude of an ellipsoidal surface.

Claim 143. (new) The apparatus of claim 139 wherein certain of the plurality of finger elements have long axes of one length and other of the plurality of finger elements have long axes of one or more other lengths.

Claim 144. (new) The apparatus of claim 139 wherein the intervals between the finger elements, measured along a latitude, are substantially uniform.

Claim 145. (new) The apparatus of claim 139 wherein a difference in electrical potential between each pair of adjacent finger elements is substantially constant.

Claim 146. (new) The apparatus of claim 139 wherein the voltage divider is a resistive divider.

Claim 147. (new) The apparatus of claim 146 wherein the resistive elements are fuses.

Claim 148. (new) The apparatus of claim 146 wherein the voltage divider is coupled to resistive finger elements having variable resistance values.

Claim 149. (new) An antenna apparatus that controls the magnitude and gradient of an electric field radiating from it, the antenna comprising:

a) a voltage divider having at least two electrical contacts coupled to it, the voltage divider disposed on the ellipsoidal surface such that it is substantially congruent with a longitude; and

b) a plurality of spaced apart, low resistance, finger elements coupled to the voltage divider at intervals between the at least two contacts, such that the electrical potential along a long axis of each element is substantially uniform and the long axes of the finger elements are substantially congruent with latitudes on the ellipsoidal surface.

Claim 150. (new) The apparatus of claim 149 wherein the width of the finger elements varies along the long axis.

Claim 151. (new) The apparatus of claim 149 wherein the voltage divider and the plurality of finger elements are disposed on an insulating surface.

Claim 152. (new) The apparatus of claim 149 wherein the finger elements encircle an ellipsoidal surface such that each end of the finger elements is coupled to the voltage divider.

Claim 153. (new) The apparatus of claim 149 wherein certain of the plurality of finger elements have long axes of one length and other of the plurality of finger elements have long axes of one or more other lengths.

Claim 154. (new) The apparatus of claim 149 wherein the azimuthal intervals between the finger elements are substantially uniform.

Claim 155. (new) The apparatus of claim 149 wherein a difference in electrical potential between each pair of adjacent finger elements is substantially constant.

Claim 156. (new) The apparatus of claim 149 wherein the long axes of the finger elements are oriented at substantially a constant angle with a latitude of the ellipsoidal surface.

Claim 157. (new) The apparatus of claim 149 wherein the voltage divider is a resistive divider.

Claim 158. (new) The apparatus of claim 157 wherein the voltage divider is coupled to resistive elements having variable resistance values.

Claim 159. (new) The apparatus of claim 158 wherein the resistive elements are fuses.

Claim 160. (new) The apparatus of claim 159 wherein the fuses are laser trimable fuses.

Claim 161. (new) An antenna apparatus comprising:

a) a first antenna and a second antenna separated by an electrical insulator;

b) the first antenna comprising,

   i) a first voltage divider having at least two electrical contacts coupled to it; and

   ii) a plurality of spaced apart, electrically conductive, finger elements coupled to the first voltage divider between the at least two electrical contacts; and

c) the second antenna comprising,

i) a second voltage divider having at least two electrical contacts coupled to it; and

ii) a plurality of spaced apart, electrically conductive, finger elements coupled to the second voltage divider between the at least two electrical contacts;

wherein the first antenna is oriented so that the finger elements of the first antenna overlay a portion of the finger elements of the second antenna; and an angle between the finger elements of the first antenna and the finger elements of the second antenna is between 0° and 180°, and

wherein the first antenna is disposed on a first side of an insulating surface and the second antenna is disposed on a second side of an insulating surface.

Claim 162. (new) The apparatus of claim 161 wherein the width of the finger elements varies along an element's length.

Claim 163. (canceled)

Claim 164. (new) The apparatus of claim 161 wherein the first voltage divider has a linear shape.

Claim 165. (new) The apparatus of claim 161 wherein the second voltage divider has a linear shape.

Claim 166. (new) The apparatus of claim 164 wherein the second voltage divider has a linear shape.

Claim 167. (new) The apparatus of claim 166 wherein the long axes of the finger elements are substantially straight.

Claim 168. (new) The apparatus of claim 167 wherein the finger elements of the first antenna are substantially orthogonal to the line of the first voltage divider, and the first voltage divider and finger elements lie substantially in a plane.

Claim 169. (canceled)

Claim 170. (new) An antenna apparatus comprising:

a) a first antenna and a second antenna separated by an electrical insulator;

b) the first antenna comprising,

i) a first voltage divider having at least two electrical contacts coupled to it; and

ii) a plurality of spaced apart, electrically conductive, finger elements coupled to the first voltage divider between the at least two electrical contacts; and

c) the second antenna comprising,

i) a second voltage divider having at least two electrical contacts coupled to it; and

ii) a plurality of spaced apart, electrically conductive, finger elements coupled to the second voltage divider between the at least two electrical contacts;

wherein the first antenna is oriented so that the finger elements of the first antenna overlay a portion of the finger elements of the second antenna; and an angle between the finger elements of the first antenna and the finger elements of the second antenna is between 0° and 180°,

wherein the first voltage divider has a linear shape,

wherein the second voltage divider has a linear shape,

wherein the long axes of the finger elements are substantially straight,

wherein the finger elements of the first antenna are substantially orthogonal to the line of the first voltage divider, and the first voltage divider and finger elements lie substantially in a plane,

wherein the finger elements of the second antenna are substantially orthogonal to the line of the second voltage divider, and the second voltage divider and finger elements lie substantially in a plane, and

wherein the first antenna is disposed on a first side of an insulating surface and the second antenna is disposed on a second side of an insulating surface.

Claim 171. (canceled)

Claim 172. (new) An antenna apparatus comprising:

a) a first antenna and a second antenna separated by an electrical insulator;

b) the first antenna comprising,

i) a first voltage divider having at least two electrical contacts coupled to it; and

ii) a plurality of spaced apart, electrically conductive, finger elements coupled to the first voltage divider between the at least two electrical contacts; and

c) the second antenna comprising,

i) a second voltage divider having at least two electrical contacts coupled to it; and

ii) a plurality of spaced apart, electrically conductive, finger elements coupled to the second voltage divider between the at least two electrical contacts;

wherein the first antenna is oriented so that the finger elements of the first antenna overlay a portion of the finger elements of the second antenna; and an angle

between the finger elements of the first antenna and the finger elements of the second antenna is between 0° and 180° and wherein,

the first antenna is disposed on a first side of a first insulating surface;

the second antenna is disposed on a first side of a second insulating surface; and

the second antenna is positioned adjacent to a second side of the first insulating surface.

Claim 173. (new) The apparatus of claim 161 wherein the first voltage divider has a substantially linear shape and the long axes of the finger elements coupled to the first voltage divider are curved.

Claim 174. (new) The apparatus of claim 173 wherein the second voltage divider has a substantially linear shape and the long axes of the finger elements coupled to the second voltage divider are curved.

Claim 175. (new) The apparatus of claim 161 wherein the intervals between the finger elements are substantially uniform.

Claim 176. (new) The apparatus of claim 161 wherein a difference in electrical potential between each pair of adjacent finger elements is substantially constant.

Claim 177. (new) An antenna apparatus comprising:

a) a first antenna and a second antenna separated by an electrical insulator;

b) the first antenna comprising,

i) a first voltage divider having at least two electrical contacts coupled to it; and

ii) a plurality of spaced apart, electrically conductive, finger elements coupled to the first voltage divider between the at least two electrical contacts; and

c) the second antenna comprising,

i) a second voltage divider having at least two electrical contacts coupled to it; and

ii) a plurality of spaced apart, electrically conductive, finger elements coupled to the second voltage divider between the at least two electrical contacts;

wherein the first antenna is oriented so that the finger elements of the first antenna overlay a portion of the finger elements of the second antenna; and an angle between the finger elements of the first antenna and the finger elements of the second antenna is between 0° and 180°, wherein one or both of the voltage dividers are resistive dividers.

Claim 178. (new) The apparatus of claim 177 wherein one or both of the voltage dividers are coupled to resistive elements having variable resistance values.

Claim 179. (new) The apparatus of claim 178 wherein the resistive elements are fuses.

Claim 180. (new) An antenna apparatus comprising:

a) a first antenna and a second antenna separated by an electrical insulator;

b) the first antenna comprising,

i) a first voltage divider having at least two electrical contacts coupled to it; and

ii) a plurality of spaced apart, electrically conductive, finger elements coupled to the first voltage divider between the at least two electrical contacts; and

c) the second antenna comprising,

i) a second voltage divider formed in a loop and having at least three electrical contacts at intervals along the loop,

ii) a plurality of spaced apart, low resistance, finger elements coupled to the second voltage divider at intervals between each two of the at least three contacts, such that the electrical potential along a each element is substantially uniform and the finger elements are oriented at a substantially a constant angle with a tangent of the loop where each element couples to the loop;

wherein the first antenna is oriented so that the finger elements of the first antenna overlay a portion of the finger elements of the second antenna; and an angle between the finger elements of the first antenna and the finger elements of the second antenna is between 0° and 180°.

Claim 181. (new) The apparatus of claim 180 wherein the width of the finger elements varies along an finger element's length.

Claim 182. (new) The apparatus of claim180 wherein the first antenna is disposed on a first side of an insulating surface and the second antenna is disposed on a second side of an insulating surface.

Claim 183. (new) The apparatus of claim 180 wherein the first voltage divider has a linear shape.

Claim 184. (new) The apparatus of claim 180 wherein the second voltage divider has a circular shape.

Claim 185. (new) The apparatus of claim 183 wherein the second voltage divider has a circular shape.

Claim 186. (new) The apparatus of claim 185 wherein the first antenna finger elements are substantially orthogonal to the line of the first voltage divider, and the first voltage divider and finger elements lie substantially on an ellipsoidal surface.

Claim 187. (new) The apparatus of claim 186 wherein the first antenna finger elements lie substantially on geodetic latitudes.

Claim 188. (new) The apparatus of claim 186 wherein the ellipsoidal surface is substantially spherical.

Claim 189. (new) The apparatus of claim 185 wherein the finger elements of the second antenna are substantially orthogonal to the circle of the second voltage divider, and the second voltage divider and finger elements lie substantially on an ellipsoidal surface.

Claim 190. (new) The apparatus of claim 189 wherein the finger elements of the second antenna lie substantially on longitudes of the ellipsoidal surface.

Claim 191. (new) The apparatus of claim 189 wherein the ellipsoidal surface is substantially spherical.

Claim 192. (new) The apparatus of claim 180 wherein the first voltage divider is substantially congruent with a longitude and the second voltage divider is substantially congruent with a latitude.

Claim 193. (new) The apparatus of claim 192 wherein the second voltage divider is substantially congruent with an equator.

Claim 194. (new) The apparatus of claim 180 wherein one or both of the voltage dividers are resistive dividers.

Claim 195. (new) The apparatus of claim 194 wherein one or both of the voltage dividers are coupled to resistive elements having variable resistance values.

Claim 196. (new) The apparatus of claim 195 wherein the resistive elements are fuses.

Claim 197. (new) An electrographic position sensing system comprising:

a) a first transmitting antenna and a second transmitting antenna separated by an electrical insulator;

the first antenna comprising,

i) a first voltage divider having at least two electrical contacts coupled to it; and

ii) a plurality of spaced apart, electrically conductive, finger elements coupled to the first voltage divider between the at least two electrical contacts; and

the second antenna comprising,

i) a second voltage divider having at least two electrical contacts coupled to it; and

ii) a plurality of spaced apart, electrically conductive, finger elements coupled to the second voltage divider between the at least two electrical contacts;

wherein the first antenna is oriented so that the finger elements of the first antenna overlay a portion of the finger elements of the second antenna; and the finger elements of the first antenna form a non-zero angle with the finger elements of the second antenna.

b) a processor coupled to the first voltage divider at two or more electrical contacts and coupled to the second voltage divider at two or more electrical contacts;

c) a receiving antenna coupled to the processor.

Claim 198. (new) The apparatus of claim 197 wherein the finger elements of the first antenna are substantially orthogonal to the finger elements of the second antenna.

Claim 199. (new) The apparatus of claim 197 wherein the first antenna is disposed on a first side of an insulating surface and the second antenna is disposed on a second side of an insulating surface and the area defined by the finger elements of the first antenna essentially entirely overlays the area defined by the finger elements of the second antenna.

Claim 200. (new) The apparatus of claim 197 wherein the first and second antennas and the insulating sheet are substantially planar.

Claim 201. (new) The apparatus of claim 197 further comprising a drive signal transmitter coupled to the processor and coupled to the first voltage divider at two or more electrical contacts and coupled to the second voltage divider at two or more electrical contacts.

Claim 202. (new) The apparatus of claim 201 further comprising an amplifier coupled between the drive signal transmitter and each electrical contact of the first and second voltage divider to which the transmitter is coupled.

Claim 203. (new) The apparatus of claim 201 further comprising a signal receiver coupled between the receiving antenna and the processor.

Claim 204. (new) The apparatus of claim 203 further comprising a signal detector coupled between the receiving antenna and the signal receiver, the signal receiver further coupled to the drive signal transmitter.

Claim 205. (new) The apparatus of claim 204 wherein the signal detector comprises a signal integrator, a signal demodulator, and an analog-to-digital converter.

Claim 206. (new) The apparatus of claim 205 further comprising a receiving amplifier coupled between the receiving antenna and the signal detector.

Claim 207. (new) The apparatus of claim 206 wherein the receiving amplifier has gain, filter, and DC rejection circuits.

Claim 208. (new) The apparatus of claim 207 wherein the receiving antenna is coupled to the signal detector and signal receiver by an electronically shielded electronic lead, the lead having sufficient length for the receiving antenna to be positioned at any point directly over the transmitting antennas.

Claim 209. (new) The apparatus of claim 208 wherein the processor contains a program that comprises an algorithm to compensate for nonlinear variance in resistivity along the voltage dividers.

Claim 210. (new) The apparatus of claim 209 wherein the processor contains two independent one-dimensional algorithms, each algorithm to compensate for nonlinear variance in resistivity along each of the two voltage dividers.

Claim 211. (new) The apparatus of claim 197 further comprising additional electrical contacts on the voltage divider, the additional contacts for coupling to a voltage device capable of pinning the voltage at each additional contact to a predetermined value.

Claim 212. (new) The apparatus of claim 208 further comprising additional electrical contacts on the first or second voltage divider, the additional contacts for coupling to a voltage device which is additionally coupled to the processor, whereby the processor controls the voltage at certain of the additional contact points along the voltage divider and thereby compensates for nonlinear variance in resistivity along the voltage divider.

Claim 213. (new) The apparatus of claim 208 wherein the processor has a program which causes a receiving-antenna locating algorithm to be applied to the first antenna and second antenna, and which subsequently calculates the position of the receiving antenna based on the signals obtained from the receiving antenna during the application of receiving-antenna locating algorithm.

Claim 214. (new) The apparatus of claim 208 wherein the insulator and transmitting antennas are disposed on a surface such that the first antenna resides on top of the insulating sheet and the second antenna resides on the bottom of the insulating sheet.

Claim 215. (new) The apparatus of claim214 wherein the finger elements of the first, top, transmitting antenna have a width that narrows at intervals that match the distance between the finger elements of the second, bottom, transmitting antenna.

Claim 216. (new) The apparatus of claim 215 wherein the second, bottom, transmitting antenna is oriented such that the bottom finger elements cross the top transmitting antenna finger elements where the top finger elements are narrow.

Claim 217. (new) The apparatus of claim 214 wherein the finger elements of the bottom transmitting antenna have a width that narrows at intervals that match the distance between the finger elements of the top transmitting antenna.

Claim 218. (new) The apparatus of claim 217 wherein the top transmitting antenna is oriented such that its finger elements cross the bottom transmitting antenna finger elements where the bottom finger elements are narrow.

Claim 219. (new) The apparatus of claim 216 wherein the finger elements of the bottom transmitting antenna have a width that narrows at intervals that match the distance between the finger elements of the top transmitting antenna.

Claim 220. (new) The apparatus of claim 219 wherein the top transmitting antenna is oriented such that its finger elements cross the bottom transmitting antenna finger elements where the bottom finger elements are narrow.

Claim 221. (new) The apparatus of claim 220 further comprising a rigid substantially planar surface placed over the transmitting antennas.

Claim 222. (new) The apparatus of claim 221 further comprising the receiving antenna disposed in a pointing stylus and coupled to the signal detector and signal receiver by an

electronically shielded electronic lead, the lead having sufficient length for the stylus be located at any point directly over the transmitting antennas.

Claim 223. (new) The apparatus of claim 222 wherein the processor has a program which causes a Five State Drive Algorithm to be applied to the first antenna and second antenna, and which subsequently calculates the position of the receiving antenna based on the signals obtained from the receiving antenna during the application of the Five State Drive Algorithm.

Claim 224. (new) The apparatus of claim 223 further comprising a programmable memory coupled to the processor.

Claim 225. (new) The apparatus of claim 224 further comprising one or more documents having symbols, images, or graphical patterns on them, their location stored in the programmable memory, such that when the stylus is placed over a symbol, image, or graphical pattern, the processor causes the position of the stylus to be calculated and relates the stylus position to the symbol, image, or graphical pattern under the stylus.

Claim 226. (new) An electrographic position sensing system comprising:

a) a first transmitting antenna and a second transmitting antenna separated by an electrical insulator;

the first antenna comprising,

i) a first voltage divider having at least two electrical contacts coupled to it; and

ii) a plurality of spaced apart, electrically conductive, finger elements coupled to the first voltage divider between the at least two electrical contacts; and

the second antenna comprising,

i) a second voltage divider shaped in a loop and having at least three electrical contacts at intervals along the loop, and

ii) a plurality of spaced apart, low resistance, finger elements coupled to the second voltage divider at intervals between each two of the at least three contacts, such that the electrical potential along a each element is substantially uniform and the elements are oriented at a substantially a constant angle with a tangent of the loop where each element couples to the loop;

wherein the first antenna is oriented so that the finger elements of the first antenna overlay a portion of the finger elements of the second antenna; and the finger elements of the first antenna form a non-zero angle with the finger elements of the second antenna.

b) a processor coupled to the first voltage divider at two or more electrical contacts and coupled to the second voltage divider at three or more electrical contacts;

c) a receiving antenna coupled to the processor.

Claim 227. (new) The apparatus of claim 226 wherein the finger elements of the first antenna are substantially orthogonal to the finger elements of the second antenna.

Claim 228. (new) The apparatus of claim 226 wherein the first antenna is disposed on a first side of an insulating surface and the second antenna is disposed on a second side of an insulating surface and the area defined by the finger elements of the first antenna essentially entirely overlays the area defined by the finger elements of the second antenna.

Claim 229. (new) The apparatus of claim 226 wherein the first and second antennas and the insulating sheet are substantially on an ellipsoidal surface.

Claim 230. (new) The apparatus of claim 229 wherein:

a) the ellipsoidal surface is a spherical or hemispherical surface;

b) the voltage divider of the first antenna lies substantially along a longitude of the spherical or hemispherical surface;

c) the finger elements of the first antenna substantially circle the spherical or hemispherical surface on latitudes;

d) the voltage divider of the second antenna lies substantially on an equator or latitude of the spherical or hemispherical surface; and

e) the finger elements of the second antenna lie substantially along longitudes of the spherical or hemispherical surface.

Claim 231. (new) The apparatus of claim 230 further comprising a drive signal transmitter coupled to the processor and coupled to the first voltage divider at two or more electrical contacts and coupled to the second voltage divider at three or more electrical contacts.

Claim 232. (new) The apparatus of claim 230 further comprising an amplifier coupled between the drive signal transmitter and each electrical contact of the first and second voltage divider to which the transmitter is coupled.

Claim 233. (new) The apparatus of claim 232 further comprising a signal receiver coupled between the receiving antenna and the processor, the signal receiver capable of receiving measured signal data from the receiving antenna and transmitting the data to the processor.

Claim 234. (new) The apparatus of claim 233 further comprising a signal detector coupled between the receiving antenna and the signal receiver, the signal receiver further coupled to the drive signal transmitter, wherein the signal receiver is capable of synchronizing the received signal data with timing data obtained from the drive signal transmitter.

Claim 235. (new) The apparatus of claim 234 wherein the signal detector comprises a signal integrator, a signal demodulator, and an analog-to-digital converter.

Claim 236. (new) The apparatus of claim 235 further comprising a receiving amplifier coupled between the receiving antenna and the signal detector.

Claim 237. (new) The apparatus of claim 236 wherein the receiving amplifier has gain, filter, and DC rejection circuits.

Claim 238. (new) The apparatus of claim 237 wherein the receiving antenna is coupled to the signal detector and signal receiver by an electronically shielded electronic lead, the lead having sufficient length for the receiving antenna to be located at any point directly over the transmitting antennas.

Claim 239. (new) The apparatus of claim 238 wherein the processor contains a program that comprises an algorithm to compensate for nonlinear variance in resistivity along the voltage dividers.

Claim 240. (new) The apparatus of claim 239 wherein the processor contains two independent one-dimensional algorithms, each algorithm to compensate for nonlinear variance in resistivity along each of the two voltage dividers.

Claim 241. (new) The apparatus of claim 226 further comprising additional electrical contacts on the voltage divider, the additional contacts for coupling to a voltage device capable of pinning the voltage at each additional contact to a predetermined value.

Claim 242. (new) The apparatus of claim 238 further comprising additional electrical contacts on the first or second voltage divider, the additional contacts for coupling to a voltage device which is additionally coupled to the processor, whereby the processor controls the voltage at certain of the additional contact points along the voltage divider and thereby compensates for nonlinear variance in resistivity along the voltage divider.

Claim 243. (new) The apparatus of claim 228 wherein the processor has a program which causes a receiving-antenna locating algorithm to be applied to the first antenna and second ntenna, and which subsequently calculates the position of the receiving antenna based on signals obtained from the receiving antenna during the application of the receiving-na locating algorithm.

Claim 244. (new) The apparatus of claim 230 wherein the insulator and transmitting antennas are disposed on a surface such that the first antenna resides on top of the insulating sheet and the second antenna resides on the bottom of the insulating sheet.

Claim 245. (new) The apparatus of claim 244 wherein the finger elements of the first, top, transmitting antenna have a width that narrows at intervals that match the distance between the finger elements of the second, bottom, transmitting antenna.

Claim 246. (new) The apparatus of claim 245 wherein the second, bottom, transmitting antenna is oriented such that the bottom finger elements cross the top transmitting antenna finger elements where the top finger elements are narrow.

Claim 247. (new) The apparatus of claim 244 wherein the finger elements of the bottom transmitting antenna have a width that narrows at intervals that match the distance between the finger elements of the top transmitting antenna.

Claim 248. (new) The apparatus of claim 247 wherein the top transmitting antenna is oriented such that its finger elements cross the bottom transmitting antenna finger elements where the bottom finger elements are narrow.

Claim 249. (new) The apparatus of claim 246 wherein the finger elements of the bottom transmitting antenna have a width that narrows at intervals that match the distance between the finger elements of the top transmitting antenna.

Claim 250. (new) The apparatus of claim 249 wherein the top transmitting antenna is oriented such that its finger elements cross the bottom transmitting antenna finger elements where the bottom finger elements are narrow.

Claim 251. (new) The apparatus of claim 250 further comprising a rigid substantially hemispherical surface placed over the transmitting antennas.

Claim 252. (new) The apparatus of claim 251 further comprising the receiving antenna disposed in a pointing stylus and coupled to the signal detector and signal receiver by an

electronically shielded electronic lead, the lead having sufficient length for the stylus be located at any point directly over the transmitting antennas.

Claim 253. (new) The apparatus of claim 252 wherein the processor has a program which causes a Six State Drive Algorithm to be applied to the first antenna and second antenna, and which subsequently calculates the position of the receiving antenna based on the signals obtained from the receiving antenna during the application of the Six State Drive Algorithm.

Claim 254. (new) The apparatus of claim 253 further comprising a programmable memory coupled to the processor.

Claim 255. (new) The apparatus of claim 254 wherein the hemispherical surface placed over the transmitting antennas has symbols, images, or graphical patterns on it, their location stored in the programmable memory, such that when the stylus is placed over a symbol, image, or graphical pattern, the processor causes the position of the stylus to be calculated and relates the stylus position to the symbol, image, or graphical pattern under the stylus.

Claim 256. (new) The apparatus of claim 255 wherein one or more hemispherical surfaces having symbols, images, or graphical patterns on them are placed over the transmitting antennas.